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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/756,957

01/13/2004

Durga P. Malladi

030224

4816

23696 7590 12/13/2007
QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER

HUYNH, NAM TRUNG

ART UNIT

PAPER NUMBER

2617

NOTIFICATION DATE

DELIVERY MODE

12/13/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
kscanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary

Application No.

10/756,957

Applicant(s)

MALLADI ET AL.

Examiner

Nam Huynh

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 12-17, 19, 23-28 and 30 is/are rejected.
- 7) ☒ Claim(s) 7, 9-11, 18, 20-22, 29 and 31-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed on 10/4/2007. Of the previously presented claims 1-33, no amendments were made.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-6, 12-17, and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2003/0050086) (hereinafter Lee) in view of Morgan et al. (US 2003/0152102) (hereinafter Morgan).

Regarding claims 1, 12, and 23, Lee discloses a method of adjusting a signal power in a variable data rate mode in a mobile communications system (title). In the scope of the invention, a mobile station and base station transmit packet data on a reverse link packet data channel (R-PDCH) (burst oriented channel) and a reverse rate

indicator channel (RRI) (rate indicator channel) (page 3, paragraph 62, 66). However, Lee does not explicitly disclose determining the presence of a packet on the rate indicator channel based on a likelihood generated by a maximum likelihood decoder. Morgan discloses a method and apparatus for predicting a frame type (title). In the scope of the invention a base station applies a maximum likelihood decoder to received data on a reverse link channel in order to detect a DTX frame (presence of a packet) (page 2, paragraph 24). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lee to allow a maximum likelihood decoder to detect DTX frames on the rate indicator channel, as taught by Morgan, in order to allow correct frame information to be sent in determination of thresholds for power control.

Regarding claims 2, 13, and 24, Morgan teaches that in CDMA 2000 each channel's transmission is divided into logical frames that are 20ms in length (predetermined interval) (page 2, paragraph 21).

Regarding claims 3, 14, and 25, Morgan teaches that an 8-bit vector (subframe interval) identifying frame types is used to identify which frames were transmitted as DTX frames (page 4, paragraph 36).

Regarding claims 4, 15, and 26, the detection of a DTX frame would constitute an invalid frame.

Regarding claims 5, 16, and 27, it is further obvious to one of ordinary skill in the art that the maximum likelihood decoder taught by Morgan analyzes the packet.

Regarding claims 6, 17, and 28, with respect to figure 3, Lee shows in the BS Rx row a time point (sub-packet ID) and data rate indicated (payload).

4. Claims 8, 19, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2003/0050086) (hereinafter Lee) in view of Morgan et al. (US 2003/0152102) (hereinafter Morgan) as applied to claim 5 above, and further in view of Jou et al. (US 2001/0019541) (hereinafter Jou).

The combination of Lee and Morgan discloses the limitations set forth in claim 5, but does not explicitly disclose that the sub-packet ID and payload size of the packet is compared to sub-packet IDs and payload sizes of previous packets. Jou discloses a system and method for the detection of zero-rate communication frames on forward and reverse links (abstract). In the reverse link, Jou teaches that a metrics are generated for detecting a zero-rate frame using the energy of different cold zones (payload) and hot zones (sub-packet IDs) of a frame. Jou exemplifies two cold zones and two hot zones of an entire 20ms frame which therefore shows the comparison of previous packets (page 8, paragraphs 87-91). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Lee and Morgan to include taking into account metrics determined by previous packets, as taught by Jou, in order to more accurately identify the reception of a zero-rate packet.

Allowable Subject Matter

5. Claims 7, 9-11, 18, 20-22, 29, and 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

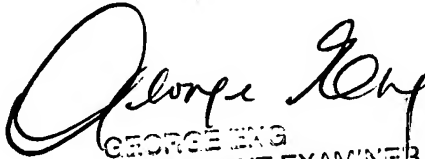
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NTH
12/4/07


GEORGE ENG
SUPERVISORY PATENT EXAMINER